

This review package can be handed in as you complete both sides of a sheet going through the chapter or at the latest on the day of this chapter's test. Use it as an on-going review or as a study booklet right before the test.

Convert to the nearest tenth:

a) 27 in. to cm

$$= 27 \text{ in} \times 2.5 \text{ cm / in.}$$

$$= \boxed{67.5 \text{ cm}}$$

$$\text{or } \underline{68.6 \text{ cm}} \text{ (if using } 2.54 \text{ cm / in.)}$$

b) 143 km to miles

$$143 \text{ km} \times 0.6 \text{ mi / km}$$

$$= \boxed{85.8 \text{ mi.}}$$

$$\text{or } \underline{89.4 \text{ mi.}} \text{ (if using } 1 \text{ mi.} = 1.6 \text{ km)}$$

A backyard measures 40 ft. by 25 ft. Find the perimeter in metres.

$$P = 2(40 + 25)$$

$$P = 130 \text{ ft.}$$

$$\rightarrow 130 \text{ ft} \times 0.3 \text{ m / ft}$$

$$= \boxed{39 \text{ m}}$$

$$1 \text{ m} = 3.25 \text{ ft}$$

$$x = 130 \text{ ft}$$

$$x = \frac{130}{3.25}$$

$$x = 40 \text{ m}$$

Brian ran six laps around a 400 yd. track. Miguel ran a 2 km. race. Who ran further and by how much?

$$\text{Brian: } 2400 \text{ yd.}$$

$$2400 \text{ yd} \times 0.9 \text{ m / yd.}$$

$$= 2160 \text{ m} \checkmark$$

$$\boxed{\text{Brian by } 160 \text{ m}}$$

$$\text{Miguel: } 2000 \text{ m}$$

$$\text{or } 2000 \text{ m} \times 1.1 \text{ yd / m}$$

$$= 2200 \text{ yd.}$$

$$\text{Brian by } 200 \text{ yd.}$$

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Convert the following:

a) 79 yd. to ft.

$$= 79 \text{ yd} \times 3 \text{ ft/yd.}$$

$$= \boxed{237 \text{ ft.}}$$

b) 5333 ft. to miles, yards and feet

$$5333 \text{ ft.}$$

$$\rightarrow 5280 \text{ ft. } 53 \text{ ft.}$$

$$(1 \text{ mile})$$

$$\rightarrow 17 \text{ yd. } 2 \text{ ft.}$$

$$\therefore \boxed{1 \text{ m } 17 \text{ yd. } 2 \text{ ft.}}$$

Maggie is getting concrete curbing for her flowerbeds. The perimeter is 82 ft. If the poured concrete is sold by the yard at \$12.50/yd., find her total cost before taxes.

$$82 \text{ ft} \rightarrow 27 \text{ yd } 1 \text{ ft.}$$

$$\therefore \text{use } 28 \text{ yd.} = 28 \times \$12.50$$

$$= \boxed{\$350.00}$$

A model train has a scale of 1:400. The model is $60\frac{3}{5}$ inches long. What is the length of real train in feet?

$$60.6 \text{ in.} = x$$

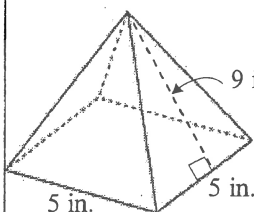
$$1 = 400$$

$$x = 24240 \text{ in.}$$

$$\therefore 24,240 \text{ in.} \rightarrow \boxed{2020 \text{ ft.}}$$

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- a) Determine the lateral area of the right pyramid to the nearest square unit.



$$LA = 4 \cdot \frac{(5)(9)}{2}$$

$$LA = 90 \text{ in}^2$$

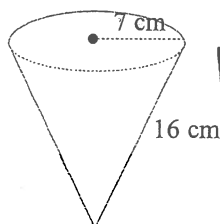
- b) Determine the surface area of the same right pyramid to the nearest square unit.

$$SA = LA + \text{base}$$

$$SA = 90 \text{ in}^2 + (5)(5)$$

$$SA = 115 \text{ in}^2$$

- a) Determine the lateral area of the right cone to the nearest square unit.



$$LA = \pi(7)(16)$$

$$LA = 352 \text{ cm}^2$$

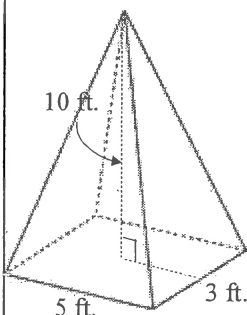
- b) Determine the surface area of the same right cone to the nearest square unit.

$$SA = LA + \text{base}$$

$$SA = 352 \text{ cm}^2 + \pi(7)^2$$

$$SA = 506 \text{ cm}^2$$

Determine the surface area of the rectangular pyramid to the nearest square unit.



$$s_1^2 = 10^2 + 1.5^2$$

$$s_1^2 = 102.25$$

$$s_1 = \sqrt{102.25}$$

$$s_2^2 = 10^2 + 2.5^2$$

$$s_2^2 = 106.25$$

$$s_2 = \sqrt{106.25}$$

$$SA = 2 \cdot \frac{(5)(\sqrt{102.25})}{2} + 2 \cdot \frac{(3)(\sqrt{106.25})}{2} + (5)(3)$$

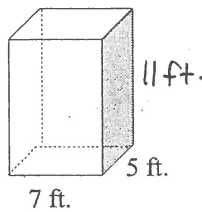
$$SA = 50.5594 + 30.9233 + 15$$

$$SA = 96.48 \text{ ft}^2$$

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Calculate the following volumes to nearest cubic unit.

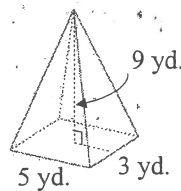
a) rectangular prism



$$V = (7)(5)(11)$$

$$V = 385 \text{ ft}^3$$

b) rectangular pyramid

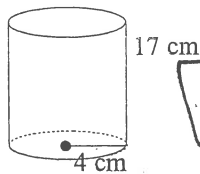


$$V = \frac{1}{3}(5)(3)(9)$$

$$V = 45 \text{ yd}^3$$

Calculate the following volumes to nearest cubic unit.

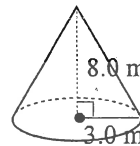
a) right cylinder



$$V = \pi(4)^2(17)$$

$$V = 855 \text{ cm}^3$$

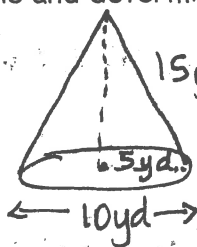
b) right cone



$$V = \frac{1}{3}\pi(3)^2(8)$$

$$V = 75 \text{ m}^3$$

A right cone has a slant height of 15 yd. and a base diameter of 10 yd. Sketch the cone and determine its volume to the nearest cubic yard.



$$h^2 = 15^2 - 5^2$$

$$h^2 = 200$$

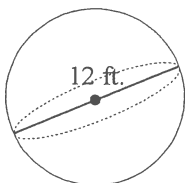
$$h = \sqrt{200}$$

$$V = \frac{1}{3}\pi(5)^2(\sqrt{200})$$

$$V = 370 \text{ yd}^3$$

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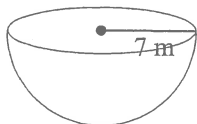
Determine the surface area of the given sphere to the nearest square unit.



$$SA = 4\pi(6)^2$$

$$SA = 452 \text{ ft}^2$$

Determine the surface area of the given hemisphere to the nearest square unit.

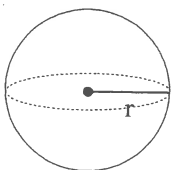


$$SA = \frac{4\pi(7)^2}{2} + \pi(7)^2$$

$$SA = 462 \text{ m}^2$$

Given the surface area and volume of two spheres. Find the radius of each to the nearest unit.

a)



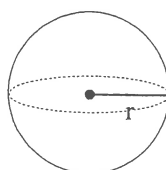
$$SA = 1521 \text{ in}^2$$

$$1521 = 4\pi r^2$$

$$r^2 = 121.0373$$

$$r = 11 \text{ in.}$$

b)



$$V = 113 \text{ m}^3$$

$$113 = \frac{4}{3}\pi r^3$$

$$r^3 = 26.9768$$

$$r = 3 \text{ m}$$